Spotlight on U.S. EPA's Design for the Environment (DfE) Program



RPN Webinar

March 14, 2013





Questions?

Submit questions by typing them into the Questions box in your GoToWebinar application.

We will compile and answer them during the Q&A at the end of the webinar.







Poll Question #1

How familiar are you with the U.S. EPA's Design for the Environment Label?

VOTE NOW







Agenda

- 1. Welcome and Introduction
- 2. DfE's Safer Product Labeling Program (standard development/recognition processes)
- 3. Other DfE Initiatives
 - Safer Detergent Stewardship Initiative (SDSI)
 - Safer Disinfectants Pilot Project
 - Alternatives Assessment Program
- 4. Q&A





Introduction











Alicia Culver Executive Director Responsible Purchasing Network

Spotlight on DfE Webinar March 14, 2013





Who is RPN?

International Network

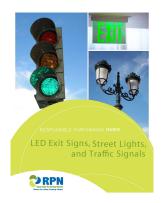


- State and local governments
- Federal agencies
- Colleges and universities
- School districts
- Businesses
- Nonprofit organizations
- Faith-based organizations

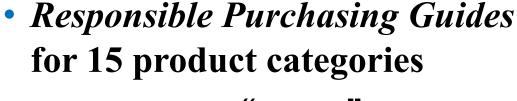








RPN Resources





- Webinars on "green" procurement issues
- Newsletter highlighting "green" purchasing activities and resources



- Sustainable purchasing policies and specifications
- Model Responsible Purchasing Report
- Calculators and other tools





Webinars

Previous

- Purchasing for Climate Protection
- Compostable Food Service Ware
- Office Supplies Roundtable
- Green Tissue Products
- Public Procurement of Energy Efficient Products



In the works

- Green Chemistry & Purchasing (APRIL 4)
- Green Lighting
- Recycled and Low-VOC Paint
- Green Purchasing Policies
- ... and many more!





Why are Safer Products Needed?











Greenwashing is Rampant











Tools are Needed to Help Purchasers Choose Safer Products







Poll Question #2

Does your jurisdiction or organization reference DfE in its green purchasing policy or specifications?

VOTE NOW





Questions? Comments?



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Design for the Environment (DfE) Label - Responsible Purchasing Network Webinar

Bridget Williams, Outreach Lead
Libby Sommer, Environmental Scientist
March 14, 2013

Contents



DfE Label

- Background
- Standard for Safer Products
- Standard Development Process
- Criteria for Safer Ingredients
- Safer Chemical Ingredients List
- Antimicrobial Pilot Project
- DfE Label in Green Purchasing
- Logo Redesign & Partner of the Year

Related Projects

- Safer Detergents Stewardship Initiative (SDSI)
- Alternatives Assessments
- OECD Working Group on Substitution of Harmful Chemicals
- Guidelines for Standards and Ecolabels in Federal Purchasing





DfE Label: Multi-Attribute, Lifecycle-Based



- Allow use of the logo on products that:
 - Use safer, green chemistry ingredients
 - Perform well
- Rigorous evaluation for <u>every</u> ingredient
 - Robust health and environmental criteria
 - Whole-product criteria
- To use the logo, companies must:
 - Use only the safest ingredients
 - Undergo annual audits
 - Sign partnership agreement with EPA
 - Meet the DfE Standard for Safer Products







DfE Label Statistics



2,750+ safer products / 550+ manufacturers / 750+ million pounds of

safer chemicals per year

≈ 2,000 products are industrial and institutional

- 700+ consumer products and growing rapidly
- Range of product categories:
 - Kitchen and bathroom cleaners, laundry detergents, disinfectants, field paints, car and boat care products, firefighting foams, hand soaps
- Potential for expansion to:
 - Personal care products, adhesives, lubricants and more

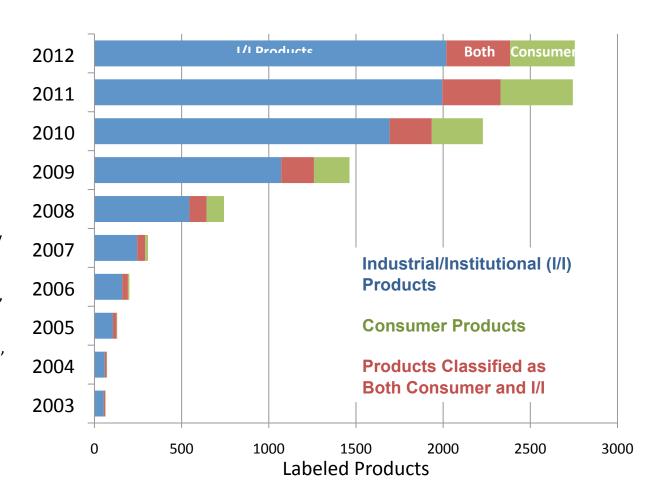


Growth in DfE-Labeled Products

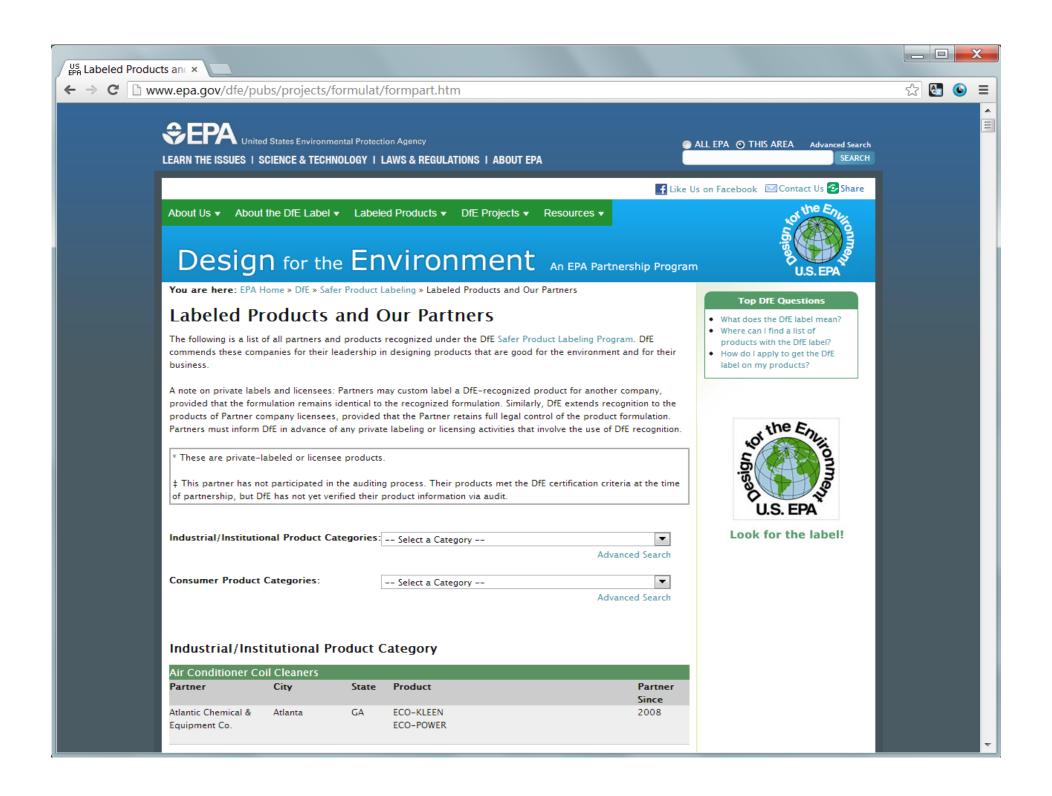


Current Sectors:

aircraft cleaners, all-purpose cleaners, athletic field paints, automatic dishwasher products, biological-based products, car care, carpet cleaners, degreasers, deicers, dish soaps, firefighting products, floor care products, graffiti removers, granite/stone cleaners, hand soaps, laundry products, marine/RV cleaners, kitchen/ countertop cleaners, leather cleaners, metal cleaners/polishes, odor removal products, oven/grill/ barbecue cleaners, pavement treatments, pet care cleaning products, toilet bowl cleaners, tub/tile cleaners, upholstery cleaners, window/glass cleaners, wood cleaners

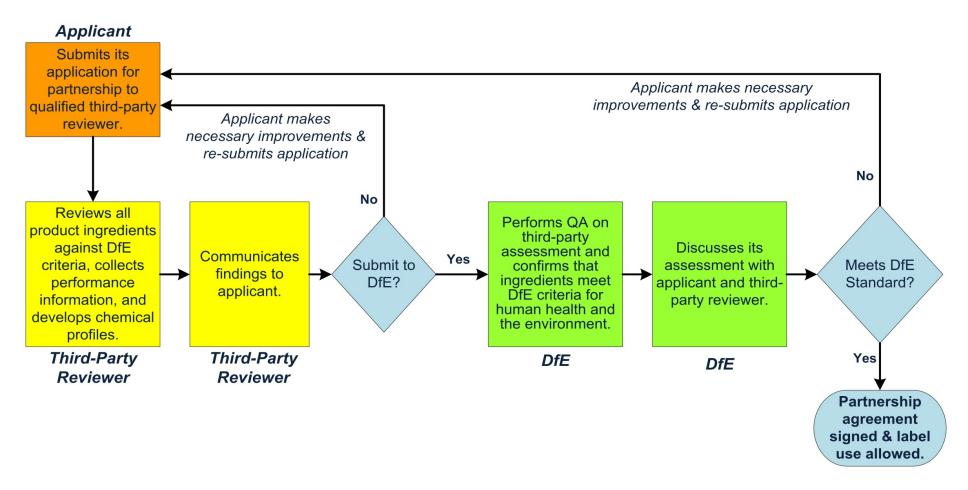






Steps to the DfE Label



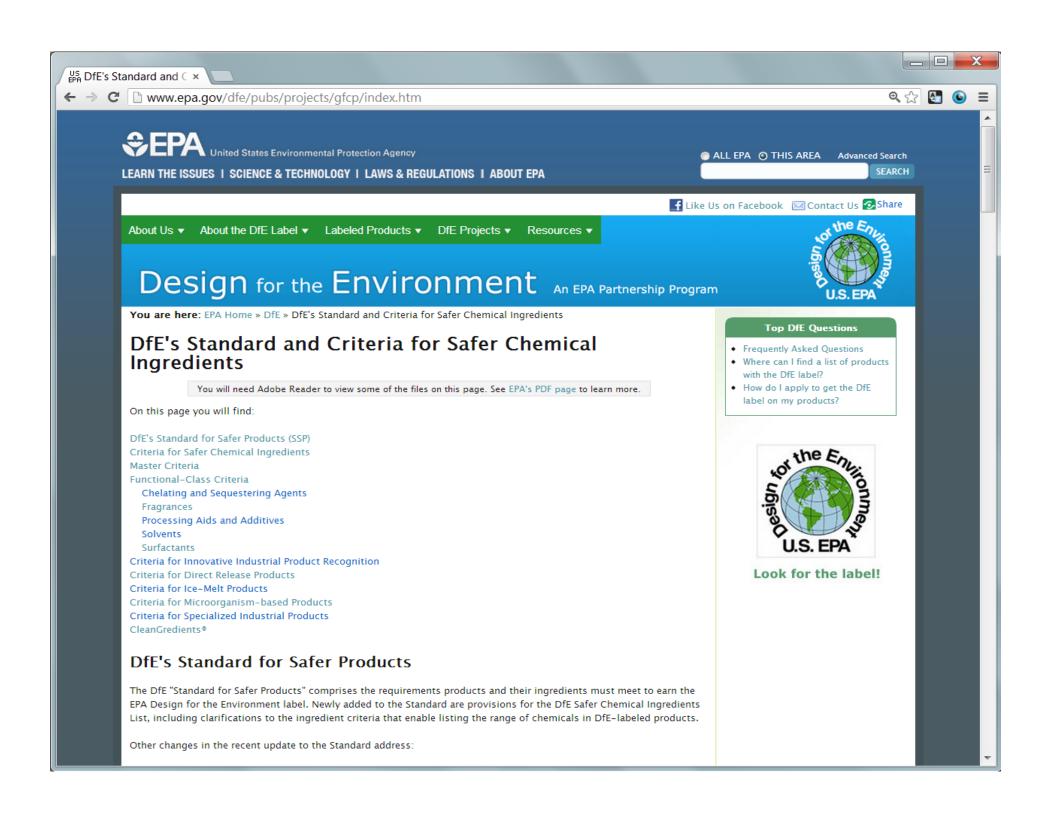












Standard for Safer Products



The DfE Standard for Safer Products – requirements products and must meet to earn the DfE label

Company-Level

- Partnership Agreement
- Auditing

- Productlevel
- Ingredient disclosure
- Performance testing
- VOCs, pH, and synergistic effects
- Packaging

Componentspecific • DfE Criteria for Safer Chemical Ingredients



Elements of DfE Standard



- Human health effects
- Environmental health effects
- VOC content
- Packaging
- Auditing
- Ingredient disclosure
- Performance

- Criteria that address:
 - Carcinogenicity
 - Mutagenicity
 - Reproductive Toxicity
 - Respiratory & SkinSensitization
 - Biodegradability & Bioaccumulation
 - Aquatic toxicity
 - Degradation products
 - Synergistic effects



Continuing Technical Improvement Group



NGOs

- Lauren Heine, Clean Production Action
- Alexandra Scranton, Jamie Silberberger,
 Women's Voices for the Earth
- Tom Neltner, Pew Charitable Trust
- James Ewell, GreenBlue

States & Federal Government

- Peter Cooke, State of Maine
- Ken Zarker, Alex Stone, State of Washington
- Robert Guilleman, EPA Region 1

Trades & Product Manufacturers

- CSPA, ISSA, ACI, IFRANA
- Clorox, SC Johnson, Clean Control,
 Spartan

Academia

Joel Ticker, Melissa Coffin, UMASS-Lowell

Retailers

- Zach Freeze, Wal-Mart
- Roger McFadden, Staples

Consultants & Third-Parties

- Teresa McGrath, NSF International
- Meg Whittaker, ToxServices
- Steve Ashkin, The Ashkin Group
- Dave Frank, AICS

Chemical Suppliers

 Stepan, Dow, Oxiteno, Arylessence, Florida Chemical



Auditing



- Established in March 2010, refined Sept 2012 three-year cycle
- Desk audit
 - Verification of authorized formula via batch tickets, bills of lading, etc.
 - Submission of product labels and literature that use DfE logo
- On-site audit
 - Focus on manufacturing process and procedures
 - Verification of authorized formula via inspection, batch tickets, bills of lading, etc.
 - Review of Good Manufacturing Practices
- Renewal (3rd year)
 - Products are re-reviewed to ensure continued compliance with the DfE Standard



Ingredient Communication - Background



- Request from Sierra Club and CSPA
 - Use outcome of multi-stakeholder negotiations as a basis
- Discussion with Continuous Technical Improvement Stakeholder Group
 - NGOs including Women's Voices for the Earth, Healthy Schools Campaign, Sierra Club, Clean Production Action, GreenBlue
 - Industry including product manufacturers, chemical manufacturers, & fragrance industry
- Implementation Timeline

Public comment period: 2010

Approach finalized: 2011

Partners notified: 2011-2012

Compliance audit: 2013



Ingredient Communication Requirements



- Public disclosure of all product ingredients via product label, website, or toll-free number
- Listing must include:
 - CAS number
 - Generic chemical name
 - Order from highest to lowest concentration
- Trade secrets protected but must use chemical descriptive name

RIGHT TO KNOW	
Ingredients	CAS#
Water	. 7732-18-5
Dipropylene glycol n-methyl	1
ether	. 34590-94-8
Dodecanol ethoxylate	. 68131-39-5
Potassium carbonate	. 584-08-7
Sodium carbonate	. 5968-11-6

Example of Acceptable Ingredient Communication



Performance Testing



- Established June 2009, refined April 2011 and Sept 2012
- Product-category specific
- Manufacturers may use alternative performance test if approved as objective and scientifically valid
- Standard refers to latest test methods established by AATCC, ASTM, CAN/CGSB, and CPSA for:

Glass cleaners

Laundry and related products

All-purpose cleaners

Oven Cleaners

Carpet cleaners/spot cleaners

Hand dish soaps

Washroom cleaners

Degreasers



Criteria for Safer Chemical Ingredients



- Define toxicological thresholds and supporting data required to determine which ingredients are the safest
- Specific criteria for each functional ingredient class:
 - Chelating Agents
 - Colorants
 - Defoamers
 - Enzymes & Enzyme Stabilizers
 - Fragrances
 - Oxidant & Oxidant Stabilizers
 - Polymers

- Preservatives & Antioxidants
- Processing Aids & Additives
- Solvents
- Surfactants
- Used as design criteria for safer chemicals
 - New, safer alternatives
 - New data
 - Testing for carcinogenicity, biodegradation, aquatic toxicity



New Fragrances Criteria



- Current criteria
 - IFRA Code of Practice, and
 - No Carcinogens, Mutagens, or Reproductive Toxicants (CMRs) or Persistent, Bioaccumulative, and Toxic chemicals (PBTs)
- New Version 2.1 (2012)
 - IFRA Code of Practice
 - No Carcinogens, Mutagens, or Reproductive Toxicants (CMRs) or Persistent, Bioaccumulative, and Toxic chemicals (PBTs)
 - No very Persistent & very Bioaccumulative (vPvB) or very Persistent
 & very Toxic (vPvT) chemicals
 - Skin sensitizers are limited in final product (aligns with EU approach).
 - No respiratory sensitizers



Fragrance Implementation Schedule



Currently, no CMRs or PBTs are allowed

2013 DfE partners receive formal notice of the version 2.1

criteria during annual audits

2014 Meet the criteria by the end of 2014

2015 Confirm during annual audit



Value of the DfE Criteria



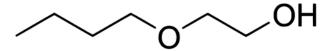
Ensures the use of safer chemicals

- Chemicals not allowed:
 - Identified through authoritative lists
 - Analogs to listed chemicals are not allowed
- Chemicals allowed:
 - Criteria for Safer Ingredients
 - Data are required to meet these criteria
 - No data = fail



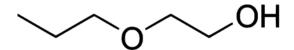
Example: Uninformed Substitution





2-Butoxyethanol

- Frequently included in lists of solvents of concern
 - Cal/OSHA Hazardous Substances
 List
- Human health concerns include hemolysis leading to toxicity in kidney, spleen and liver.
- Not allowed in DfE-labeled products



2-Propoxyethanol

- Not widely recognized as a solvent of concern
 - Not on Cal/OSHA Hazardous Substances List
- Similar human health concerns including hemolysis leading to toxicity in kidney, spleen and liver.
- Not allowed in DfE-labeled products



DfE's Safer Chemical Ingredients List (SCIL)





www.epa.gov/dfe/saferingredients



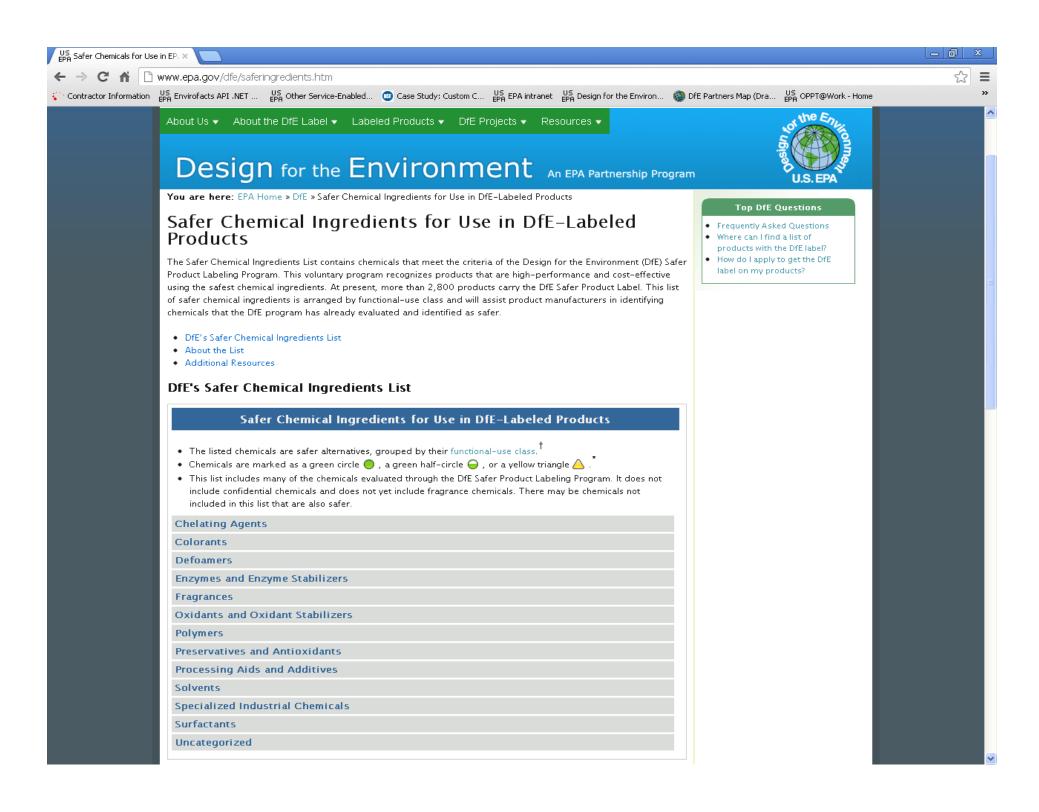
- List of chemicals that meet DfE Safer Chemical Criteria and are acceptable for use in DfE-labeled products
- Responds to demand from stakeholders
- Published September 19, 2012
- Living list updated frequently
- Almost 500 chemicals

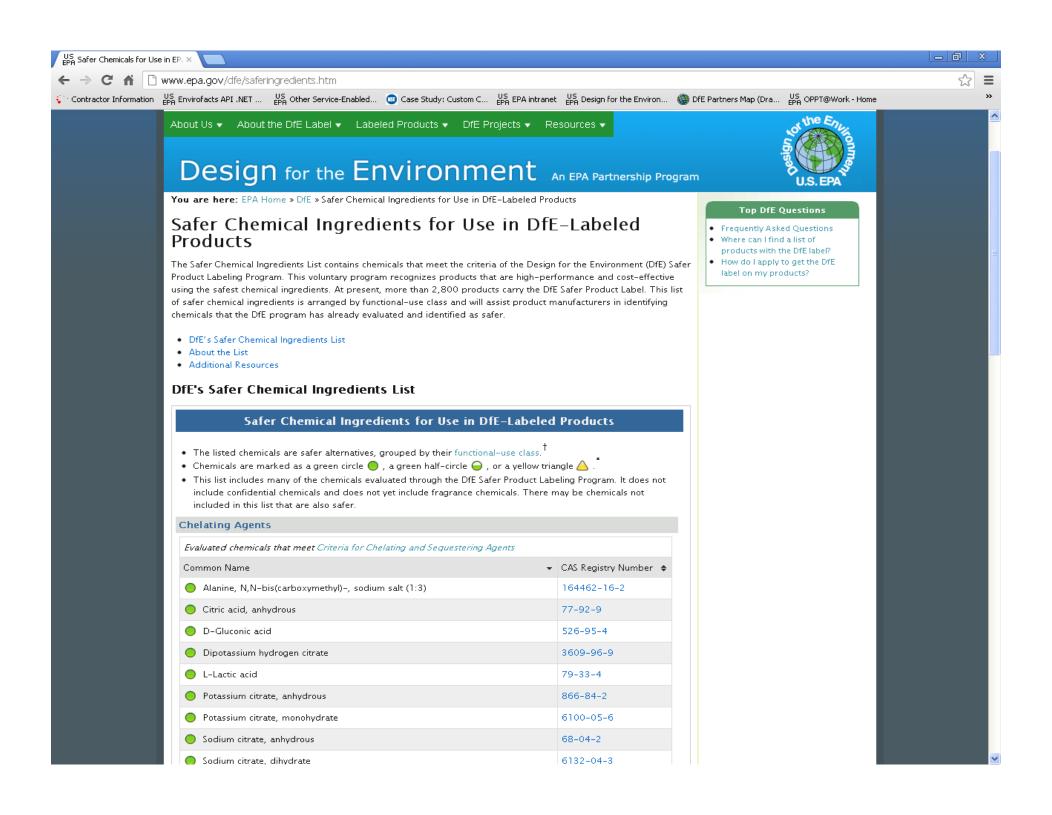


DfE's Safer Chemical Ingredients List



What is included	What is NOT included	What CleanGredients offers
Chemical Abstract Service	Source of chemical	Source of chemical
(CAS) number	Chemical manufacturer	Chemical manufacturer
• Names	Trade name	Trade name
- Common chemical name	 Formula-specific information (e.g., 	 Formula-specific information (e.g.,
- EPA inventory name	chemical use, percent	chemical use, percent
 Functional class (e.g., 	composition)	composition)
surfactant, solvent)	 Trade secret chemicals 	 Trade secret chemicals
Color-coding system	 Chemicals on the confidential TSCA inventory 	





Enhancing the SCIL



- Chemical manufacturers work with DfE to list safer chemicals in parallel with TSCA PMN process
- Product and chemical manufacturers work with DfE to list safer chemicals
 - Fragrances
 - Personal care chemicals
 - Apparel and building industry chemicals
- Retailers encourage product suppliers to use chemicals from SCIL



Useful Metric for Sustainability



Product meets DfE Criteria



Product increasingly uses safer chemicals (One source is DfE's Safer Chemical Ingredients List)

Product avoids chemicals of known concern



OPP Antimicrobial Pilot Project



- Extended to May 3, 2015
- 2009 list of authorized actives included:
 - hydrogen peroxide
 - lactic acid
 - citric acid
- List of actives increased in 2012 to include:
 - ethanol
 - isopropanol
- Currently, 6 products have met the criteria and may use the DfE label
- Project webpage: http://go.usa.gov/g4fj

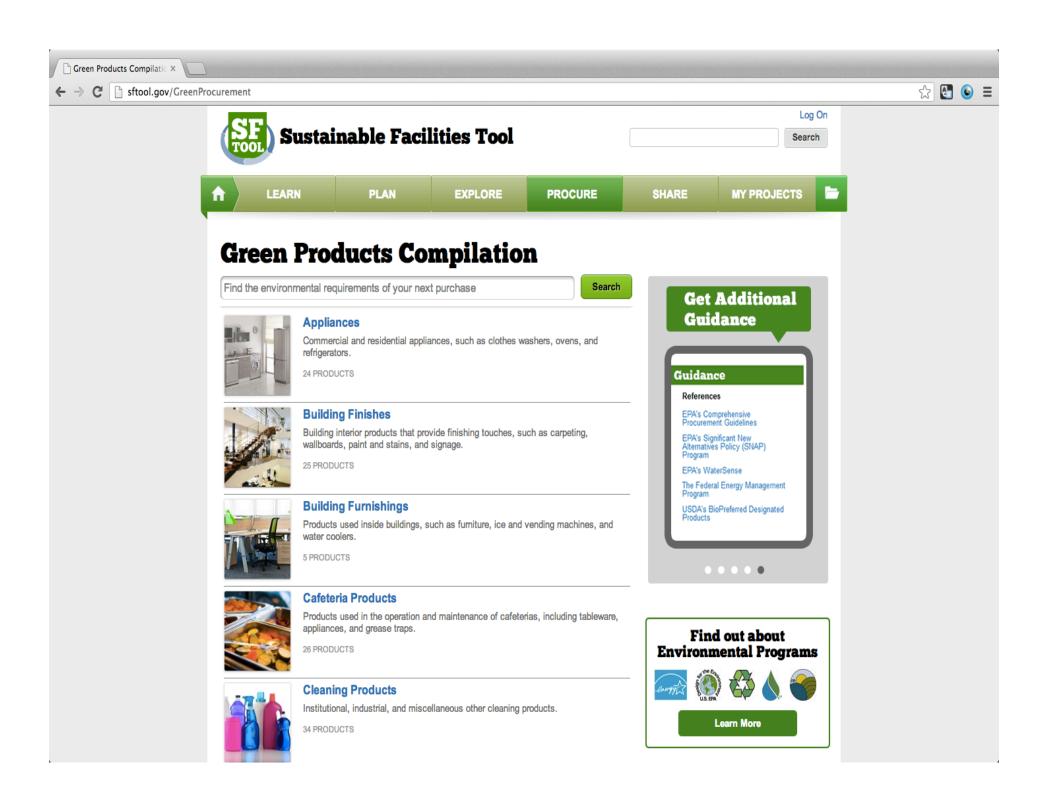


Use of the DfE Label in Green Purchasing



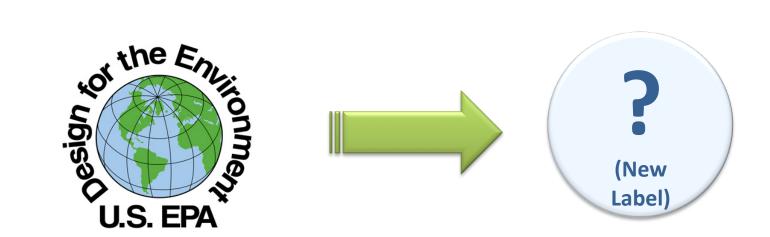
- Green Products Compilation part of GSA's Sustainable Facilities Tool (http://sftool.gov/GreenProcurement)
- DOD EMALL
- States, such as:
 - Illinois
 - New Jersey
 - others
- Retailers
 - Home Depot's Eco Options
 - Private branded products (Safeway's Bright Green, Target's Up & Up, Costco's Kirkland, Walmart's Great Value)





DfE Logo Redesign





DfE's logo unchanged since early 1990s



DfE Logo Redesign



EPA's eco-labels:







- DfE mission to promote safer chemical-based products is not conveyed by the current DfE logo
- Redesign could help better convey human health and environmental benefits of safer products
- Increase consumer recognition and confidence



DfE Logo Redesign - Milestones



Timeframe	
January – February 2013	Explore brand personality with DfE stakeholders
March – April	Design and test concept
May – June	Choose concept; develop materials to assist partners with transition
June	Roll-out new DfE logo design
July 2013 through 2014	Phased transition to new logo



DfE Partner of the Year Awards Program



- Recognize outstanding stakeholder efforts to further the safer chemistry goals of DfE
 - Product manufacturers
 - Full line of DfE-labeled products & other criteria
 - Retailers
 - Sustainability program with incentive for safer, DfE-labeled products
 - Purchasers, Distributors
 - Innovators (e.g., chemical manufacturers)
 - Supporters (e.g., NGOs, trades, academia, sports teams)
- Approved by OMB January 23, 2013
- Visit: <u>federalregister.gov/a/2012-451</u>





Related Projects



SDSI: Safer Detergents Stewardship Initiative

- Voluntary recognition program that awards businesses for the use of only safer surfactants
- Recognition awarded to manufacturers, formulators, retailers, distributors, institutional purchasers, & others
- Champion status
 - Currently manufacture, use, sell, or buy products that only use safer surfactants
 - 51 Champions (e.g., Colgate-Palmolive, S.C. Johnson, Sierra Club)
- Partner status
 - Commitment to manufacture, use, sell, or buy products that only use safer surfactants
 - 23 Partners (e.g., Jelmar, County of Riverside, CPA)



U.S. EPA

Stewardship Initiative

Alternatives Assessments - Background



- Identify and compare potential chemical alternatives
- Can consider chemicals the Agency has chosen for action and alternatives

Methodology

- Convene Stakeholders and refine Scope
- Identify potential alternatives
- Evaluate priority chemicals & potential alternatives
 - » High, Moderate, or Low ratings for:
 - Human health effects
 - Environmental fate & effects
- Provide information manufacturers can use to create more sustainable products through "informed substitution" & help minimize potential for unintended consequences



Recent DfE Alternatives Assessments



- Tetrabromobisphenol A (TBBPA) in Printed Circuit Boards
 - » combustion testing completed
- Nonylphenol and Nonylphenol Ethoxylates (NP/NPE)
 - » final report May 2012
- Bisphenol A (BPA) in Thermal Paper
 - » draft report posted July 2012
- Decabromodiphenyl Ether (decaBDE) Flame Retardant Alternatives in Plastics
 - » draft report posted July 2012
- Certain Phthalates
 - » list of potential alternatives Spring 2013
- Hexabromocyclododecane (HBCD) Alternatives in Building Insulation
 - » draft report Spring 2013



BPA in Thermal Paper (Draft, Partial)



Human Health Hazard Concern Ecotoxicity
Hazard Concern

Environmental Hazard Concern

		Human Health Effects						Aquatic Toxicity		Environmental Fate						
Chemical	CASRN	Acute Toxicity	Carcinogeni city	Genotoxicity	Reproductiv e	Development	Neurological	Repeated Dose	Skin Sensitizer	Eye Irritation	Dermal Irritation	Respiratory Sensitization	Acute	Chronic	Persistence	Bioaccumula tion
Bisphenol A 2,2-bis(p-hydroxyphenyl)propane	80-05-7	L	М	L	Н	Н		M	M	M	M		Н	Н	VL	L
Bisphenol F Bis(4- hydroxyphenyl)methane	620-92-8	L	М	L	Н	Н		Н	L	VH	М		M	н	L	L
Bisphenol C 2,2'-Bis(4- hydroxy-3-methylphenyl) propane	79-97-0	L	М	M	н	н		М	М	VH	М		VH	VH	M	М
MBHA Methyl bis(4-hydroxyphenyl)acetate	5129-00-0	L	М	L	н	н		М	L	М	М		н	н	М	L
BisOPP-A 4,4'- Isopropyllidenebis(2- phenylphenol)	24038-68-4	L	М	L	н	н		М	М	М	М		L	VH	VH	М
Bisphenol AP 4,4'-(1- Phenylethylidene) bisphenol	1571-75-1	L	М	L	н	н		М	М	М	М		VH	VH	н	М

OECD Ad Hoc Working Group on Substitution of Harmful Chemicals



- Brings together 30+ experts from Governments,
 Industry (chemical suppliers and down-stream users),
 NGOs and Trade Unions
 - Chaired by EPA and ECHA
- Phase 1: Develop a toolbox to support alternatives assessment (now)
 - Working on tool selector to help sort through and chose appropriate alternatives assessment tools
 - Open stakeholder workshop Fall/Winter 2013
- Phase 2: Harmonization of alternatives assessment practices (beginning Winter 2013)



Executive Order 13514



- Agencies measure, report, and reduce their greenhouse gas emissions from direct and indirect activities;
- Work with US govt. suppliers to get data for tracking and reducing scope 3 greenhouse gas emissions related to the supply of products and services to the Government
- Leverage federal acquisitions to foster markets for sustainable technologies and environmentally preferable materials, products, and services
- Advance sustainable acquisition



Section 13 Product Standards & Ecolabels Subgroup



- Section 13 Interagency Workgroup, GSA chair
 - Interagency Product Standards and Ecolabels
 Subgroup
 - GSA / EPA co-chairs
 - Includes DOD, DLA, USDA, NIST, NIOSH, VA, NASA, DOC, DOI, and more.
 - 6 other sub-groups focused on training, education, data systems, GHG inventories, and communications



Subgroup Approach



Grounding

Initial Guideline Development & Assessment Stakeholder Inreach / Outreach

Draft Guidelines

- Identified existing environmental purchasing requirements for federal buyers.
- Identified existing guidelines relating to product standards and ecolabels.
- Completed May 2011.

- Developed initial draft set of Guidelines.
- Tested draft Guidelines based on feedback from organizations responsible for environmental standards and ecolabels.
- Completed September2011.

- Engaged government stakeholders to gain feedback.
- Sought awareness and high-level input from non-government stakeholders.
- Bilateral stakeholder meetings completed January 2012.

- Submit Guidelines and Implementation Recommendation to CEQ and OMB.
- Completed February 2013.



Organizations Surveyed

FSC	FSC Forest Management, Chain of Custody & recycled Content				
GreenSeal	GreenSeal				
BIFMA	Level				
SCS	Floor Score, Indoor Adv; Sustainable Product; Biodegradable; Other				
SFI	SFI				
SMART	Sustainable Materials Rating Technology (SMaRT)				
TCO Development	тсо				
The Carbon Neutral Company	Certified Carbon Neutral				
UL Environment	GreenGuard, Ecologo, ULE sustainably certified (wallboard, doors)				
GEC/IEEE	EPEAT				
NSF	NSF Carpet, Textiles, Wallcoverings, Resilient Flooring, Roofing Membranes				
EPA/DOE	Energy Star				
EPA	WaterSense				
EPA	Design for the Environment (DfE)				
USDA	BioBased				
DOE	FEMP Designation Purchasing Specifications				
EPA	Recovered Materials Advisory Notices (RMANs)/ CPG				



DRAFT Interagency "Section 13" Guidelines:



- Guidelines for the Process for Developing Standards refers to the procedures used to develop, maintain, and update an environmental standard.
- Guidelines for the Environmental Effectiveness of the Standards refers to the criteria in the environmental standard or ecolabel.
- Guidelines for Conformity Assessment refers to the procedures and practices by which
 products are assessed for conformity to the requirements specified by standards and
 ecolabeling programs.
- Guidelines for Management of Ecolabeling Programs refers to the organizational and management practices of an ecolabeling program.



Useful web pages and additional information



DfE website:

www.epa.gov/dfe

DfE-Labeled Products:

www.epa.gov/dfe/products

DfE Standard for Safer Products:

www.epa.gov/dfe/pubs/projects/gfcp/index.htm#Standard

DfE Safer Chemical Ingredients List:

www.epa.gov/dfe/saferingredients

ES&T -- "Chemical Alternatives Assessment: Enabling Substitution to Safer Chemicals:"

pubs.acs.org/doi/full/10.1021/es1015789



QUESTIONS?



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www.epa.gov/dfe



Thank You for Attending RPN's Webinar:

Spotlight on U.S. EPA's Design for the Environment (DfE) Program

Questions? Comments?



